



# TROUT UNLIMITED

*Conserving, protecting and restoring North America's coldwater fisheries and their watersheds.*

Deerfield River Watershed Chapter

PO Box 133

Shelburne Falls MA 01370

Honorable Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426

March 29, 2019

Spawning Trout Study Submissions  
Bear Swamp Pumped Storage Project No. 2669

Dear Secretary Bose,

Today we are submitting two Trout Spawning Study Reports. Last March I had submitted the first year report. For some reason we are unable to locate that report within the FERC system, although it has been referred to by your agency and others. I am submitting both reports as a result.

The studies prove: 1. Brown trout and some rainbow trout are spawning in the main stem of the Deerfield in the late fall; 2. spawning is successful; 3. Brookfield operations, with dramatic daily changes in flow rates, are having an impact on that effort; and 4. some eggs are maturing.

Based on our initial report, FERC ordered Brookfield to conduct additional assessments with an effort to determine what minimum flow would be required to keep redds covered with adequate water coverage. Brookfield's analysis was done based upon transects done at locations where no redds were found by us. The analysis based on suitable substrate assumes that fish will go where the substrate is ideal. This is contrary to what we found. Our study proves otherwise.

There is no doubt, spawning fish are particular in their spawning habits and location selection process. We believe, based on our findings and a review of unpublished research in the Dead Diamond River in New Hampshire, being conducted by a Dartmouth University Phd candidate, that fish select spawning grounds not only based on substrate, but other factors including upwelling. This research is still being developed. However based on our findings the fish in the Deerfield are definitely wanting to go to very specific areas to spawn, and those areas are severely compromised by existing operations. This is particular at the end of "Long Pool" and "Beaver Island" where the largest clusters of redds were found.

Based on our field analysis, we believe a minimum flow of 350 cfs must be maintained from November 1 – April 15 to protect these spawning redds with adequate water coverage. (Brookfield's analysis at different transects indicated 328 cfs.)

However vulnerable emerging fry and young of year are also subject to drastic hydropeaking events from mid-April through at least June. We seek less drastic hydropeaking fluctuations

during this period of time as well, with appropriate ramping up and ramping down to enhance survivability.

We also believe increased winter minimum flows will have significant benefits to the macro invertebrate community.

All of these modest adjustments to the flow regime, which Brookfield can afford to do at little expense, only bodes well for the fishery as a whole. With these modest adjustments we believe the Deerfield can in fact become a robust wild trout fishery with associated economic benefits to this poor rural area of the Commonwealth.

Thank you for your consideration in this regard.

Very truly yours,

Kevin D. Parsons  
Co-chair Conservation Committee